



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,429	01/18/2006	Tomoko Aoki	2003JP317	7607
26289 7590 06/12/2009 AZ ELECTRONIC MATERIALS USA CORP. ATTENTION: INDUSTRIAL PROPERTY DEPT. 70 MEISTER AVENUE SOMERVILLE, NJ 08876			EXAMINER MOORE, MARGARET G	
			ART UNIT	PAPER NUMBER
			1796	
			MAIL DATE	DELIVERY MODE
			06/12/2009 PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/565,429

Applicant(s)

AOKI ET AL.

Examiner

Margaret G. Moore

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 to 9 is/are pending in the application.
- 4a) Of the above claim(s) 5 to 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 to 4, 8, 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date 5/10/06

1. Applicant's election of Group I, claims 1 to 4, 8 and 9, in the reply filed on 4/13/09 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Please note that as a result of this election, the application has been transferred and is currently being examined by Margaret Moore.

2. Claims 3 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 3, the difference between the two compounds as monomer units is unclear.

In claim 4, the Chemical formula 1 is confusing. It is unclear how the formula can have a $p+q+r$ value of less than 3, since Si is tetravalent. Also it is unclear what the Si atom is bonded to in the event that p , r or q is 0.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, 4 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 99/55789, as interpreted by the English language equivalent Nakashima et al.

Nakashima et al. teach a silica containing liquid for preparing a low dielectric constant film. As can be seen on column 7, lines 30 and on, this coating can contain the reaction product between a polysilazane (meeting the formulas shown in claim 4 and 8) and a silane. Though the silanes on column 7, lines 40 to 45, do not appear to specifically embrace an acetoxysilane, column 7, lines 52 and on, specifically states the same alkoxysilanes as used in the preparation of the fine particles of silica can be used. Column 6 specifically refers to phenyltriacetoxysilane as an operable "alkoxysilane" for use in the preparation of the fine particles of silica. Thus Nakashima et al. teach that phenyltriacetoxysilane can be use in the reaction with the polysilazane in column 7. This occurs in the presence of a solvent (line 66 of column 7). Such a composition meets the instant claims.

For claim 2, please note that the silica in Nakashima et al. is used to form pores in the resulting coating. See column 2, lines 6 and on.

6. Claims 1, 4 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Haluska et al.

Haluska et al. teach coatings prepared from polysilazanes. See the formulas on column 2, lines 23 and on, as they meet the limitations of claims 4 and 8. Column 4, line 39, teaches the addition of vinyltriacetoxysilane while the bottom of column 4 teaches various solvents. This anticipates the claims.

7. Claims 1, 2, 4 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Oezelli et al.

Oezelli et al. teach a glass primer. As can be seen from column 1, lines 33 and on, this contains a mixture of a resin, a functional silane, an organosilazane and a solvent. The resin, taught on the bottom of column 1, is capable of forming a pore as it can decompose upon heating. Column 2, line 34, specifically teaches vinyltriacetoxysilane. The bottom of column 2 through column 3 teaches silazanes which will have a formula meeting claims 4 and 8. This anticipates the instant claims.

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/55789, as interpreted by the English language equivalent Nakashima et al.

The teachings in Nakashima et al. were noted above. As can be seen from column 7, lines 40 to 45, the polysilazane can be reacted with a silane having methyl or ethyl groups (note that X can be an alkyl group of from 1 to 8 carbon atoms). From the teachings on column 6, it follows that acetoxysilanes are intended to be used in a comparable and equivalent manner as alkoxysilanes. Thus one having ordinary skill in the art would have been motivated by the teachings in Nakashima et al. to use an acetoxysilane such as a methylacetoxysilane or ethylacetoxysilane, with an expectation of obtaining predictable results. In this manner claim 9 is rendered obvious.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Margaret G. Moore whose telephone number is 571-272-1090. The examiner can normally be reached on Monday and Wednesday to Friday, 10am to 4pm.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Margaret G. Moore/
Primary Examiner, Art Unit 1796

mgm
6/10/09